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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/509,621

09/29/2004

Jung-Hoon Anh

3260-26

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09/07/2006

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EXAMINER

SHAW, AMANDA MARIE

ART UNIT

PAPER NUMBER

1634

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/509,621

Applicant(s)

ANH ET AL.

Examiner

Amanda M. Shaw

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on August 3, 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. This action is in response to the amendment filed August 3, 2006. Applicant's arguments have been fully considered but are not persuasive to overcome all grounds of rejection. All rejections not reiterated herein are hereby withdrawn. This action is made final.

Claims 12-16 and 18-20 are currently pending. Claims 12-13, 15-16, and 18-20 have withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected subject matter. Accordingly, Claim 14 will be addressed herein.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 14 remains rejected under 35 U.S.C. 102(b) as being anticipated by Fodor et al (PGPUB 20010053519) for reasons set forth in the Office Action dated 11/30/2005 and reiterated below.

Regarding Claim 14, Fodor et al teach a microarray containing fragments from the following genes: thymus and activation-regulated chemokine gene, dihydropyrimidinase related protein-2 gene, lysosomal acid lipase, calmodulin gene,

interferon regulatory factor 4 gene, DC-Lamp gene. Specifically Fodor et al teach nucleic probes containing 10 or more nucleotides attached to a solid support to form an array which can be used to monitor gene expression levels by hybridization of the array to a DNA library (Column 1, lines 32-37). The nucleic acid array taught by Fodor et al comprises a complete set of 1,048,576 distinct oligonucleotide sequences that are 10 nucleotides long (Claim 5). Since the microarray of Fodor comprises all possible 10 mers, this microarray includes 10 mer fragments of the genes mentioned above.

3. In the response filed August 3, 2006, Applicants traversed the rejection over Fodor by stating that they do not believe that the specific combination of components of the claims is taught by the cited art. The applicant believes that the general teaching of the cited art is insufficient to teach the specific combination of the claims.

This argument has been fully considered but is not persuasive because the Fodor et al reference teaches an array that comprises all possible 10 mers of the human genome. Therefore the Fodor reference does in fact teach fragments of all of the genes recited in claim 14.

4. THE FOLLOWING IS A NEW REJECTED NECESSITATED BY AMENDMENTS  
MADE TO THE CLAIMS

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1634

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Affymetrix (Affymetrix Data Sheet, HuGeneFL Array, released November 1998) in view of de Saint-Vis (Immunity 1998).

Regarding Claim 14, Affymetrix teach a microarray which contains nucleotide sequences from the following genes: thymus and activation-regulated chemokine gene or its fragment, dihydropyrimidinase related protein-2 gene or its fragment, lysosomal acid lipase or its fragment, calmodulin gene or its fragment, interferon regulatory factor 4 gene or its fragment. The Affymetrix GeneChip HuGeneFL Array is a single array that enables the relative monitoring of mRNA transcripts of approximately 5,6000 full length human genes. The HuGeneFL Array has been available for sale since November 1998 (Affymetrix Data Sheet). Specifically the HuGeneFL Array contains the thymus and activation-regulated chemokine gene (Symbol CCL17), the dihydropyrimidinase related protein-2 gene (Symbol DPYSL2), the lysosomal acid lipase gene (GenBank U04285), the calmodulin gene (Symbol CALM2), and the interferon regulatory factor 4 gene (Symbol IRF4)(Array Finder available via the Internet at <URL: [affymetrix.com](http://affymetrix.com)>).

Affymetrix does not teach that the GeneChip HuGeneFL Array contains nucleotide sequences from the DC-lamp gene.

However, de Saint-Vis et al teach the full-length sequence of the DC-lamp gene (See page 326).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the array of Affymetrix by including probes that are specific for the detection of the DC-lamp gene for the benefit of being able to monitor the mRNA transcript of an additional gene that was known in the art. Additionally it was also known in the art at the time of the invention was made that nucleic acid probes for detecting specific genes could be made if the sequence of the gene was known. The parameters and objectives involved in the selection of probes to detect specific genes were well known in the art at the time the invention was made. Moreover, software programs were readily available which aid in the identification of conserved and variable sequences and in the selection of optimum probes. The prior art is replete with guidance and information necessary to permit the ordinary artisan to design probes capable of binding to the DC-lamp gene or fragments thereof. Further, the ordinary artisan would have had more than a reasonable expectation of success of obtaining additional probes for identifying specific genes. Thus, for the reasons provided above, the array containing the DC-lamp gene or fragment thereof would have been obvious to one of ordinary skill in the art.

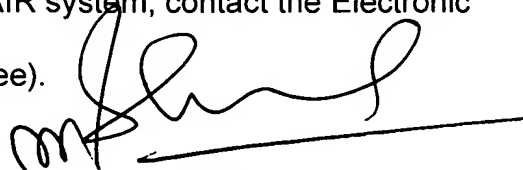
### **Conclusion**

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda M. Shaw whose telephone number is (571) 272-8668. The examiner can normally be reached on Mon-Fri 7:30 TO 4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached at 571-272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**RAM R. SHUKLA, PH.D.**  
**SUPERVISOR, PATENT EXAMINER**